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DEPARTMENT OF THE ARMY OFFICE OF THE ADJUTANT GENERAL WASHINGTON, D.C. 20310



AGDA-A (M) (14 Jul 71) FOR OT UT 704138

30 July 1971

SUBJECT: Operational Report - Lessons Learned, Headquarters, 20th Engineer Battalion, Period Ending 31 October 1970

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DEPARTMENT OF THE ARMY Headquarters, 20th Engineer Battalion (Combat) APO San Francisco 96318

EGCB-OP

31 October 1970

SUBJECT: Operational Report - Lessons Learned, 20th Engineer Battalion (Combat) for the Period Ending 31 October 1970, RCS CSFOR-65

Commanding Officer 937th Engr Gp (Cbt) APO 96226

Commanding General 18th Engr Bde APO 96374

Commanding General US Army Vietnam ATTN: AVHGC (DST) APO 96558

Commander in Chief US Army Pacific ATTN: GPOT-DT APO 96558

Assistant Chief of Staff for Force Development Department of the Army ATTN: ACSFOR DA Washington, D.C. 20310

1. Operations: Significant Activities:

a. At the beginning of the reporting period, the Battalion Headquarters was located at Camp Wilson, Pleiku, RVN. Alpha Company was located at Camp Wilson, the first platoon was assigned the mission of dismantling the asphalt plant at the C.I.A. Yard in Pleiku and transporting same to the Weigt-Davis Industrial Complex. The second platoon was involved in perimeter upgrade, while the third platoon continued construction of culvert 19-34.1. Bravo Company was also located at Camp Wilson and assigned the mission of perimeter upgrade, SEA hut installation, as well as the repair of the Camp Holloway Airfield. The third platoon was located at Weigt-Davis, engaged in the construction of the headwall for the new 75 TPH crusher for 34"(-) rock for the asphalt plant. Charlie Company, also located at Camp Wilson, was assigned the mission of reconstructing seven of the thirteen guard towers as well as upgrading the fighting positions and perimeter defense systems. Delta Company, now at full strength due to the return of the platoon which had just completed the upgrade of LTL-2E was located at Weigt-Davis and in-

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volved in the construction of the foundation for the asphalt plant. The 584th Engr Co (LE) was located at Weigt-Davis minus the second platoon which was located at Camp Radcliffe in support of the 299th/15th Engr Co (LE) upgrading compound roads. The first platoon was engaged in the construction of an AP-3 barrel farm for the forthcoming asphalt plant. The third platoon began the installation of a swimming pool which had been transferred from Engineer Hill, while the support platoon continued extraction operations in the quarry. The 509th Engr Co (PB), with the attached third platoon of the 553rd Engr Co (PB), was located at Camp Wilson, minus the first platoon which was located in Qui Nhon providing haul support for the 84th Engr Bn (Constr). The Security Detachment is located at Weigt-Davis and conducting day and night operations in an attempt to prevent enemy contact with the compound. The Quality Control section is located at Camp Wilson and conducting tests on the soils at the Kontum Airfield in an effort to provide accurate data for the upcoming repair of said airfield. The battalion presently is conducting training for 290M operators for the 20th ARVN Engr Gp. There are two students scheduled for graduation as licensed operators in the middle of August. At the beginning of the reporting period, discussions were being conducted between the 20th Engr Bn (Cbt) Commander LTC Robinson, LTC Lau, Executive Officer of the 20th ARVN Engr Gp, and LTC Wilson, advisor to the ARVN Engineers in an attempt to arrange a joint ARVN-US Affiliation Project. At the beginning of the reporting period, the battalion was heavily committed to the job of securing three installations in the Pleiku area. These were Camp Wilson, the C.I.A. Yard, scheduled for turnover at the end of October, and Webb Quarry which the battalion still had not been authorized to abandon. These commitments weighed heavily on the available manpower for other pressing projects.

b. The major effort for the battalion during the reporting period was the dismantling and relocation of the Standard Steel - 120 TPH asphalt plant located at the C.I.A. Yard in Pleiku. Alpha Company was responsible for the dismantling of the plant and the loading and transporting of said plant to Weigt-Davis. The Company was also engaged in the construction of the Pascoe Maintenance building to be used at Weigt-Davis as a parts building for the plant. In addition the company had direct control and supervision of the local nationals who has been operating the plant for the past two years under the supervision of the 815th Engr Bn (Constr) now located in Da Lin. These local nationals proved an invaluable asset in the reconstruction of the plant as they were able to install all the integral piping and flow systems from their knowledge of the operation of the plant. The week started with the labeling of all the components prior to their disassembly and a regular sequence was established whereby each component was moved to a predesignated location where it underwent the close scrutiny of the maintenance personnel, and when repaired, a new coat of paint. The weights of each component were determined so adequate lifting devices and transportation equipment could 31 October 1970

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be located. The aggregate dryer which weighed approximately 30 tons, was the most difficult obstacle to cross, but with the help of our 40 ton crane and an M-88 tank retriever borrowed from the 62nd Maint Bn, we were able to lift the dryer onto a low boy that had been reinforced and extended. Using extreme care and traveling at a speed less than 10 miles per hour, the dryer was moved the 40 kilometers south to Weigt-Davis. Then using the same lifting equipment, the dryer was placed on the foundation constructed by Delta Company. As each foundation was completed at Weigt-Davis, a component was moved down from Pleiku and installed. Using this process, the plant continued on schedule and construction went up in sequence. In addition to building the foundations for the plant proper at Weigt-Davis, Delta Company was also responsible for building the sheds for the hot oil heater and generators, pads for two 12 barrel melters, an asphalt storage tank and a fuel storage tank. In addition the company built a 70 foot by 50 foot loading dock capable of holding 400 barrels of asphalt. They were also responsible for building the aggregate feeder headwall, behind which, was stored the 4" (-) rock and the sand used to produce the asphalt. All in all it was an extensive company effort and helped to increase the morale of the men as they began to see the results of their many hours of hard labor. The 584th Engr Co (LE) was also involved in the move as they were responsible for building the AP-3 barrel storage farm as well as the initial earth work on the site. When the monsoon rains threatened to halt the construction, tents were constructed over the job sites and the 584th was called in to dig extensive drainage facilities around the site in an effort to lower the increasing water table that was hampering excavation for the foundations. Bravo Company also got into the act when they were called upon to build the headwall extension for the new 75 TPH crusher as well as the reinforced concrete slab upon which it would sit. It was then the job of the support platoon of the 584th to install the crusher and have it producing rock prior to the completion of the plant. After extensive efforts to locate a suitable sand source in the Cheo Reo area failed, it was determined that it would not only be safer but probably just as fast to continue using the same sand which had previously been used from the river bed near the city of Kontum. The original completion date for the plant was scheduled for 15 Oct, and on that very day the entire battalion witnessed the first batch of asphalt leave the plant. It was indeed an accomplishment that the men had every right to be proud of. The joy was short lived however for less than two weeks after the completion of the plant a fire started near the loading dock and before it could be stopped, burned completely out of control. The entire loading dock with 400 barrels of asphalt was destroyed and along with it, the two 150 KW generators were damaged, the air compressor, hot oil heater, transfer pump, meters, electrical wiring and both the hot oil heater shed and generator shed were a total loss. It took three months to build the plant and only three hours to destroy an extensive portion of it. At the end of the reporting period the rebuilding of the plant had begun. A new loading dock has been designed and extensive efforts to locate new equipment is under

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way. The plant proper was not damaged and we expect to have the plant again operational by the middle of December. An investigation as to the cause of the fire is under way but as yet no conclusions have been made. The new design of the plant will be such as to preclude the chance of this happening again. Fire walls are being installed between flammable materials and wherever possible nonflammable material will be used in the reconstruction. Although the damage was extensive, it should not cause any serious delay in our LOC Construction on QL-14S and QL-14N with scheduled completion dates of 6 July 71 and 3 Apr 71 respectively.

- c. The construction of the culverts at QL-19-34.1 was undertaken by the third platoon of Alpha Company. It was an extensive project and the original scope of work had been changed three times prior to commencement. The original culverts that existed at this location were 5-48" concrete culverts that had been destroyed by the enemy. A bypass around the site was made and it was Alpha Company's job to install 3-72" metal culverts to replace those that were damaged. The proposed location of the new culverts was approximately 15 foot below existing road level and rice paddies on both sides of the job site made excavation extremely difficult. With an increase in the monsoon rains, it was evident that many problems would be encountered before the completion. The first problem met by the crew was the excavation of the site around the old culverts and the destruction of the existing headwalls. A crane with clamshell was utilized to excavate the dirt around the site and the existing headwalls were blown in place. The level of the water began increasing steadily it became necessary to dig a diversion channel to keep the water out of the job site. Both the new headwalls and 20 foot culvert sections were prefabricated at Camp Wilson in preparation for installation on site. Blast rock was placed at the bottom of the excavation and this in turn was covered with decomposed granite to provide a stable, uniform bed for the three culverts. The culverts were then transported to the job site with the use of a crane. Cross bracing was welded between the pipes to hold them in place, while decomposed granite was compacted around each pipe. From the 17th to the 24th of August, fill was hauled, placed, and compacted around the culverts. From the 24th of August to the 3rd of September the preconstructed headwalls were hauled to the job site, secured, and poured. The last work of the project involved the completion of the roadway by laying a 4" layer of compacted 12"(-) rock and a final seal coat of RC-800. The site will be completed with asphalt as soon as the plant becomes operational. The project was completed and open for traffic on the 12th of September. Some of the problems encountered during the project were the initial changes in design, heavy monsoon rains, deadlined highly essential equipment and the theft of construction materials at night on the unsecured job site.
- d. The beginning of the reporting period found Charlie Company and portions of Bravo Company involved in the upgrade of the perimeter at Camp Wilson. When the 20th E.B.C. took over Camp Wilson the 13 existing

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guard towers were in extremely poor condition and seven of these were condemned. New towers were designed and as soon as a tower was torn down construction immediatedly began on a new one. A delay in delivery of command controlled lumber delayed the project on several occasions, but these times were used to replace perimeter wire and build claymore blast walls, so no serious set backs were encountered. During the construction of each tower, the sentinels used the area as a walking post and thereby maintaining the compound security during the construction. Intermediate fighting positions were also renovated and the vegetation around the perimeter was eliminated. At the completion of the project, an IFFV perimeter security inspection was conducted of Camp Wilson and only minor deficiencies were noted. Weigt-Davis was also in need of perimeter upgrade, and much effort was utilized in the renovation of the living, fighting bunkers and the perimeter defenses. Bravo Company's third platoon, at the completion of the crusher headwall, undertook the job of rebuilding bunker #8. The bunker was about to collapse, and it was necessary to completely rebuild it. The project was finished on 5 September 1970. The first platoon of Alpha Company spent a portion of the reporting period reinforcing bunker #2. All of the units at Weigt-Davis are constantly engaged in removing vegetation from the perimeter and upgrading their own defense.

- e. During the reporting period there were numerous projects performed in support of neighboring units within the battalion A.O. There was a total of 10 minesweeps performed for the 6/14th Artillery on the road from QL-14N to Plei Mrong. The road was swept from coordinates ZA 216599 to ZA 113676 with negative finds or incidents. There was also one minesweep performed for 52nd Artillery Group from Dragon Mountain on QL-14S to F.S.B. Oasis. There was negative finds or incidents. Bravo Company was engaged in two projects at Camp Holloway, the first was the installation and repair of revetments along the airfield. Rock was hauled and placed within the revetments and RC-800 was utilized over 12"(-) rock placed in rutted sections of the parking apron. The second project undertaken was the completion of the B.O.Q. facilities for 52nd Avn Bn. This project was transferred from the 815th Engr Bn (Constr) and consisted of placing wall panels and doors, and the installation of electrical facilities. Another extensive project undertaken by both Bravo and Charlie Company was the repair of the airfield apron at Kontum for the 17th Avn Group. This project was quite extensive and required the removal of a large section of M8A-1 matting. When the matting was removed, it was necessary to fill and compact the earth and add a layer of rock. When the rock had been layed and rolled, it was then shot with RC-800. With this completed the matting was replaced and the edges secured by pouring concrete around them. The project began on 18 August 1970 and was completed on 7 October 1970.
 - f. During the reporting period the 20th Engr Bn (Cbt) turned over

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two different installations and was thereby able to release substantial amount of manpower to more pressing projects. Webb Quarry was totally dismantled for abandonment and the material given to the 20th ARVN Engr Group. Charlie Company completed this project during the third week in October. The C.I.A. Yard was prepared for turnover by Alpha Company. The area was to be used as an ARVN dependent housing area. The area was policed and the turnover ceremony was held on the 17th of October 1970.

- g. There were many projects during the reporting period dealing with the repairs and maintenance of LOC projects within the battalion A.O. In the vicinity of Weigt-Davis, Delta Company was engaged in pot hole repair along LTL-7B and around its intersection with QL-14S. The 584th Engr Co (LE) began on extensive repair of the haul road bypass between LTL-7B and QL-14S. Drainage ditches were cut along the entire length, the existing culvert was extended, and the road was shaped and crowned for black base. Black base will be layed on this haul road prior to the beginning of the upgrade of QL-14S. In the Pleiku area, LOC maintenance is a continuous project due to the continual enemy destruction of bridges and culverts, besides culvert 19-34.1, repairs were necessary on QL-19E at the approaches to bridge 19-34, on the deck of QL-19-35 and culvert 19-29.1. Charlie Company also replaced a culvert at coordinates BR 150525 while Alpha Company made extensive pot hole repairs along the section of QL-19E from Pleiku to the Mang Yang. Bravo Company was also involved in LOC maintenance with the repair of a blown culvert and headwall on QL-14N. It was necessary to replace 50 feet of 36" culvert and install new headwalls. Bravo Company also made several pot hole repairs on the route between Pleiku and Kontum. In preparation for the new construction season, Charlie Company is engaged in the repair of the Pleiku Haul Road. It is necessary to perform extensive pot hole repairs and in some areas it is necessary to completely tear out the existing road, recompact and shape, and lay new rock down. This project should be completed by the end of November.
- h. The Quality Control section of the battalion has been extremely busy during the reporting period. During the month of August the section was located at Camp Wilson and engaged in testing samples from the Kontum Airfield in preparation for the repair of that installation. They were also continuing to complete data from last construction season in an effort to improve on the procedures for the forthcoming season. Near the end of August extensive testing was conducted in the Cheo Rio area to determine an appropriate sand source for the asphalt plant. In the beginning of September the efforts were moved to QL-14S to make tests on possible borrow pits from the road junction of LTL-7B to the city of Ban Blech, sieve analysis, Atterburg limits and CBR tests were performed in an effort to find an acceptable source for the subgrade on QL-14S. During the month of October the section was engaged in testing the rock sources to be used for the soils stabilization plant, Atterburg limits, sieve analysis and Marshall stabilities were run on the samples.

During the last week in October the Quality Control section was moved to Weigt-Davis to be closer to the road project. A new laboratory was built and the section has the capabilities of running sieve analysis, Atterburg limits, CBR tests and Marshall stabilities. All of the personnel in the section have been to Quality Control School in Long Binh so we are looking forward to some excellent results from the section this construction season.

- i. There were a total of 350 awards given out this reporting period and 230 home town news releases. The battalion news letter, the Wavy Arrow, was published twice during the period. There were also 15 news releases for engineer papers.
- j. At the beginning of the reporting period the Battalion Commander was attempting to establish a joint ARVN-US affiliation project with the 20th ARVN Engr Gp. At that time no confirmed decisions had been made. During August several Civic Action projects were conducted in the Pleiku area. The surface drainage of Ben Ho Village was improved and several roads were graded in and around the village. The area around the clinic operated by the Evangelistic Church in downtown Pleiku was surfaced using about three 5-ton truck loads of 12"(-) aggregate. This is one of the facilities to which the battalion, through Operation Engineers Care, donated approximately \$1200 during the week. Two 5-ton loads of l_2^{1} (-) aggregate was also used to improve the playground for a Catholic Church in Pleiku. We also donated a few loads of scrap lumber to the church. During the month of September it was decided that the conversion of Bridge 14-18 in Pleiku from single lane DS Bailey to a two lane DS Bailey would be a good ARVN-US affiliation project. The project was begun with this battalion providing earthmoving assets and friction piles necessary for the bridge supports. Our portion of the project was completed at the end of the month.
- k. Enemy action in the area seemed to be on an increase this reporting period with numerous incidents of direct and indirect fire from the enemy. Weigt-Davis seems to be the prominent target as the compound was attacked by indirect 82mm mortar fire on five separate occasions. There were no serious injuries in any of these attacks and very light material damage. There were several incidents of ambushes along the highways and again there were no serious injuries. These attacks occurred on QL-19E and QL-14S. The security detachment at Weigt-Davis while on partol made contact with enemy troops on the 2nd, 3rd, 4th, 6th, and 24th of August. Although they inflicted serious injuries on the enemy and captured several automatic weapons there were no injuries to the members of the detachment.
- 1. Many changes have occurred within the battalion in preparation for the upcoming construction season. Alpha Company will remain at Camp Wilson engaged in the repair and maintenance of QL-19E. The first platoon is located at Ban Me Thout and is working on projects transferred

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from the 19th Engineer Battalion. In addition Alpha Company has acquired two platoons from the 19th and these will also remain at Ban Me Thout. Bravo Company has relocated to Weigt-Davis and is operating the soils stabilization plant, the two barrel farms and the reconstruction of the damaged asphalt plant. Charlie Company is located at Camp Wilson and engaged in the LOC repairs of QL-14N. Delta Company is located at Weigt-Davis and has again been assigned the mission of running the black base laydown, paving train and drainage structures on QL-14S. The 584th Engr Co (LE) is located at Weigt-Davis and continuing extraction operations in the quarry as well as operating three crushers. The company is also responsible for all the earthwork and ditch construction on QL-14S. The 509th Engr Co (PB) has been formed into a provisional dump truck company with the 5-ton assets of Alpha, Bravo, Delta, and the 584th Engr Companies and is located at Weigt-Davis providing haul capabilities for the upgrade of QL-14S. The third platoon of the 553rd Engr Co (FB) has been assigned to Alpha Company and is stationed at Camp Wilson providing haul assets for the battalion. The 15th Engr Co (LE) has just joined the battalion and is located at Camp Wilson assigned the mission of helping Charlie Company in the repair of QL-14N. The Security Detachment remains at Weigt-Davis providing local security and running day and night operations around the vicinity of the compound.

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- 2. Lessons Learned: Commander's Observations, Evaluations and Recommendations.
 - a. Personnel:
- (1) Need for an Operations NCO in the authorized T.O.E of a Panel Bridge Company.
- a. Observation: TOE/MTOE 5-77G for a panel bridge company does not authorize a slot for Operations NCO.
- b. Evaluation: When a bridge is immobilized and the company is operating in its secondary mission of hauling, centralized control becomes essential. In this light, an Operations/Training NCO can be one of extreme value to a company in this position.
- c. Recommendation: A slot be authorized for an Operation/Training NCO in the panel bridge company to keep from pulling a man from other needed areas.
 - (2) Increasing Troop Morale
- a. Observation: It had been observed that the morale of the troops in the battalion seemed to be extremely low and a definite poor attitude was noted.
- b. Evaluation: The operational requirements of this unit are extremely high and at many times it was necessary to work the troops long hours with relatively little relaxation. It is also a noted fact that many times so much effort is made on engineer projects that projects providing entertainment and relaxation are forgotten. The tremendous success of Organization day proved this to be true.
- c. Recommendation: It is recommended that a more noted emphasis be placed on the construction and utilization of recreational facilities such as swimming pools, basketball courts, volleyball courts and other such activities. It is further recommended that an intramural program be started which will not only increase unit integrity but also create an atmosphere of friendly competition.
 - b. Intelligence: None
 - c. Operation:
 - (1) Duration of Minesweep:
- a. Observation: When a minesweep is over a great distance extreme fatigue often develops among the sweep teams causing a lackadaisical attitude to form about the job before them.

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- b. Evaluation: With fatigue, sweep teams can not be alert and it only takes one overlooked landmine to kill a man. It is of the utmost importance to keep sweepers refreshed and alert. This can be accomplished by frequent change over of personnel. The sweep should be divided into two separate teams of twelve men each. Each individual team would consist of three, three man detector teams (2-EM, 1 NCOIC) and one point element (2-EM, 1-NCO). Each individual team would sweep for a maximum of 2 hours while the other 12 men rode on vehicles. Personnel of the detector would swing a a detector for a maximum of 20 minutes before being relieved. Switching off of 12 man teams would be at the discretion of the officer in charge.
- c. Recommendation: Following the above procedure will keep the sweep teams fresh, more alert, and will in turn produce a more effective minesweep.
 - (2) Expedient Overpass for culvert construction:
- a. Observation: Many times during the monsoon season the enemy will attempt to impair traffic by destroying culverts under roads in areas where a bypass around the site is relatively impossible.
- b. Evaluation: In a recent such case there was no bypass available for detouring traffic while reconstruction of the culvert was in process. An armored launch bridge was used over the blown culvert and reconstruction was begun undermeath. This enabled construction to begin immediately and many hours were saved in trying to construct a bypass. An acceptable substitute for the AVLB is an M 476 dry span.
- c. Recommendation: It is recommended that when ever possible the above utilization of an AVLB or M 4T6 dry span should be used to not only decrease the time required to complete the repairs, but also to keep the roads open and thereby decrease the effects of the enemy efforts to impair the supply routes.
 - (3) Removable Seats for 5-ton Dump Truck Beds:
- a. Observation: It has been observed that on many occasions 5-ton dump trucks are used to haul troops out to the job site.
- b. Evaluation: In order to eliminate troops standing in the back of dump trucks on the way to the job site, removable seats were installed. These seats eliminate a potential safety hazzard and when the seats are removed, the dump truck can be used at the job site for its desired purpose.
- c. Recommendation: When ever there is a limited supply of adequate vehicles to carry work parties out to the job site, and dump trucks must be utilized, removable seats should be installed in the bed of the

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truck to reduce a potential safety hazzard.

- (4) Retaining Wall Construction:
- a. Observation: The underlying material was such that individual holes could not be dug for each pole of a retaining wall.
- b. Evaluation: A trench was dug for all the poles. The wall was prefabricated, lifted into place with a crane, and the trench filled with concrete.
- c. Recommendation: It is advisable to prefabricate retaining walls and then place them into position. The walls should not be longer than 30' since longer walls present problems when placing them into position. A dozer or simular equipment should be used to insure the headwall remains vertical while the concrete cures.
 - (5) Use of Angle Iron to Increase Bearing Capacity:
- a. Observation: In a recent project where large concrete footers were to be built, the foundation proved very unstable during the monsoon rains.
- b. Evaluation: Sections of angle iron were cut into length of approximately six feet and driven into the ground to serve as expedient piles. The footers were then poured over the angle iron with satisfactory results.
- c. Recommendation: Whenever the ground is such that concrete foundations when poured, are relatively unstable and of limited strength expedient piles can be made from material at hand such as heavy rebar or angle iron, thereby greatly increasing the bearing capacity of said foundations.
 - (6) Laying M8A-1 Matting:
- a. Observation: When laying M8A-1 matting, much difficulty has been experienced in driving the pins into the female ends.
- b. Evaluation: It has been found that by welding two connector pins together in the shape of a "T", these pins can easily be driven into the female end.
- c. Recommendation: When problems occur in driving the pins of M8A-1 matting a simple and expedient tool can be produced by the above procedure.

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- (7) Dozers Working Crusher Stockpiles:
- a. Observation: Past experience at crusher sites has proven that rock from the conveyor fills the front pan on the dozer, stockpiling the rock, in a matter of hours, resulting in the rock damaging fan belts.
- b. Evaluation: It was found by removing the pan under the belts allowing rock to fall through, would eliminate this problem and decrease damage to the dozer.
- c. Recommendation: That dozers operating crusher stockpiles should have the pan under the fan belts removed so as to prevent damage to the belts.
 - (8) Odor Around Mess and Washing Facilities:
- a. Observation: It was observed that when asphalt, black base or other such materials was used around mess facilities, there was a definite increase in foul odors.
- b. Evaluation: It is suggested that rock, asphalt, black base, sand or gravel not be used around mess or washing facilities. Results show that these materials absorbed liquids, food particles and will cause a lasting odor.
- c. Recommendation: It is recommended that only concrete be used around these facilities as it will not only eliminate odor, but proves easy to clean and disinfect.
 - (9) Remaining Dozer Tracks Behind the Jersey Spreader:
- a. Observation: When laying cold mix, four to six men were required to rake over the tracks created by the D-7E pushing the Jersey Spreader.
- b. Evaluation: The two 8"x16" posts being used as a drag were not satisfactory. They served very little purpose other than to even some very high places where the cold mix spilled over the hopper.
- c. Recommendation: The number of rakemen needed was decreased to two, with the construction of a steel triangular drag (see Incl #2). With two welded cutting edges providing the legs and a 12 foot piece of angle iron as the base, the drag effectively spreads the cold mix. The 8"x16" post is used behind this to provide an even more uniform surface.

EGCB-OP

SUBJECT: Operational Report - Lessons Learned, 20th Engineer Battalion (Combat) for the Period Ending 31 October 1970, ECS CSFOR-65

- d. Organization: None
- e. Training: None
- f. Logistics: None
- g. Communications: None
- h. Material: None
- i. Other: None

RICHARD T. ROBINSON

LTC, CE Commanding

2 Incl

15

1. 20th Engr Bn (Cbt) units.
2. Removing dozer tracks behind the Jersey Spreader
Incl 1 w/d HQ DA

LOC-OP (31 Oct 70) 1st Ind SUBJECT: Operational Report - Lessons Learned, 20th Engineer Battalion (Combat), for the period ending 31 October 1970 RCS CSFOR-65

- Da, hoadquarters, 937th Engineer Group (Combat), APC 96226, 23 November 1970
- TU: Assistant Chief of Staff for Force Development, Department of the Army (ACSFUR-DA), Washington, D.C. 20310 Commandin - Ceneral, 18th Engineer Bri made, ATTN: AVEC-CC, APO 96377
- 1. The Operational Report Lessons Learned from the 20th Engineer Battalion (Combat) is forwarded IAW 18th Engineer Brigade Regulation 525-15. Reporting period is 1 August through 31 October 1970.
- 2. This headquarters has reviewed paragraph 1, Operations: Significant Activities and considers it to be an accurate account of 20th Engineer Battalion (Combat) activities for the reporting period.
- This headquarters concurs with all recommendations in paragraph 2.
- 4. The contents of this indersement have been brought to the attention of the 20th Engineer Battalion (Combat).

Commanding

19

AVBG-05 (31 October 1970) 2nd Ind SUBJECT: Cperational Report - Lessons Learned, 20th Engineer Battalion (Combat), Period Ending 31 October 1970, RCS CSFOR-65 (R2)

DA, HEADQUANTERS, 18TH ENGINEER BRIGADE, APO 96377 12 December 1970

TO: Commanding General, U. S. Army Vietnam, ATTN: AVHGC-DST, AFO 96375

- 1. This headquarters has reviewed the Operational Report Lessons Learned for the 20th Engineer Battalion (Combat), as indorsed by the 937th Engineer Group (Combat). The report is considered to be an accurate account of the Battalion's activities during the reporting period.
- 2. This headcuarters concurs with the observations and recommendations of the Battalion and Group Commanders.

FOR THE COMMANDER:

Major, AGC Adjutant General

CF:

1 - 00, 937th Engr Gp 1 - 00, 20th Engr Bn

AVCC-MO (31 Oct 70) 3rd Ind SUBJECT: Operational Report - Lessons Learned, 20th Engineer Battalion (Combat), Period Ending 31 October 1970, RCS CSFOR-65 (R2) 12 JAN 1971

Headquarters, United States Army Engineer Command Vietnam, APO 96491

TO: Commanding General, United States Army Vietnam, ATTN: AVHDO-DO, APO 96375

The significant activities and lessons learned have been reviewed and are an adequate reflection of the unit's operations during this period.

FOR THE COMMANDER:

R. P. SPENCER JR

1LT, CE

Assistant Adjutant

CF: 18th Engr Bde 20th Engr Bn (Cbt) AVHD0-D0 (31 Oct 70) 4th Ind

SUBJECT: Operational Report - Lessons Learned, 20th Engineer Battalion (Combat) for the Period Ending 31 October 1970, RCS CSFOR-65

Headquarters, United States Army Vietnam, APO San Francisco 96375 8 MAR 1971

TO: Commander in Chief, United States Army Pacific, ATTN: GPOP-DT, APO 96558

- 1. This Headquarters has reviewed the Operational Report-Lessons Learned for the quarterly period ending 31 October 1970 from Headquarters, 20th Engineer Battalion (Combat) and comments of indorsing headquarters.
- 2. Reference item concerning "Need for an Operations MCO in the Authorized TOE of a Panel Brigade Company," page 9, paragraph 2a(1). Authorization of an Operations/Training NCO in the Panel Brigade Company has Army-wide implications. Therefore, the unit should submit a recommendation for TOE change through command channels to Headquarters, United States Army Combat Developments Command, IAW AR 310-31. Unit has been so advised.

FOR THE COMMANDER:

R. E. THOMPSON J. Dr. CPT. AGC

Assistant Adjutant General

Cy furn: USAECV 20th Engr Bn GPOP-DT (31 Oct 70) 5th Ind SUBJECT: Operational Report Lessons Learned, HQ 20th Engineer Battalion (Combat), for Period Ending 31 October 1970, RCS CSFOR-65 (R2)

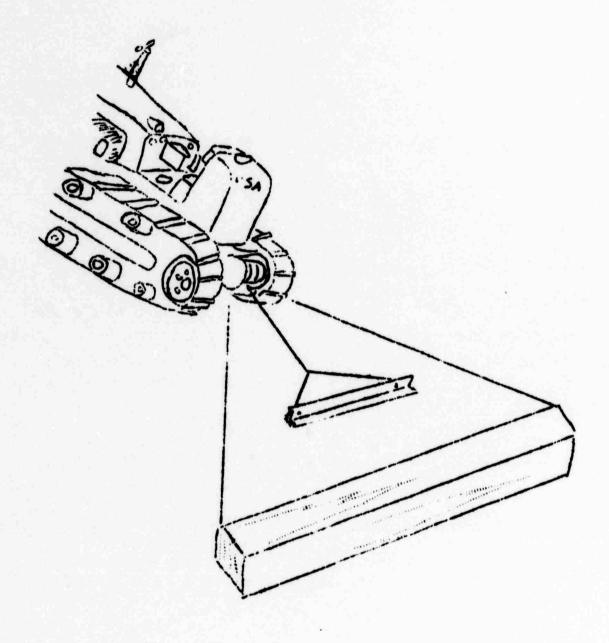
HQ, US Army, Pacific, APO San Francisco 96558 25 MAR 1971

TO: Assistant Chief of Staff for Force Development, Department of the Army, Washington, D. C. 20310

This headquarters concurs in subject report as indorsed.

FOR THE COMMANDER IN CHIEF:

D. D. CLINE 1LT, AGC ABST AG



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Inclosure #2